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Original.

A CASE OF PUERPERAL ECLAMPSIA.

BY PAUL KEMPF, M. D.

In presenting this paper to the medical public, I am cognizant of the fact that nothing new or startling is recorded; but, in order to swell the statistics and to give some few points peculiar to the case in question, from which the statistician and compiler may reap benefit, I submit the following:

In the evening of the 12th day of February, this year, I was called to attend Mrs. T. H. in labor. The lady was a German, of light complexion, and although stout, well-built, and full-blooded, she was of a nervous temperament, and at the present moment anxious about the *dénouement*. This was her first confinement in childbed.

According to her testimony, her health during pregnancy was good, and her urine normal. With some apprehension I noticed puffiness of the face, neck, arms, and the lower extremities. Questioning elicited that this had been the case for several days. The skin had a peculiar, unpromising, yellowish hue. On the day before, slight, irregular, and seemingly inefficient uterine pains began. Till now she had complained of great difficulty in retaining her urine. Some hours before this moment her bowels had relieved themselves.

Upon examination I found the os uteri to be dilated to the size only of a nickel, and the edge of the circle was thin as paste-board and hard. This condition of the cervix and the peculiar feel beyond it convinced me that the membranes had already burst, notwithstanding the declarations of the patient herself and of the nurse to the contrary. It afterward proved that I was correct. Parenthetically I may be allowed

to note that in nine cases out of ten the ungraduated midwife, as well as the primiparous woman, knows not when the liquor amnii escapes, or has escaped. The child presented the head in the first position.

Almost immediately after the examination the eyes of the patient became fixed, and the whole countenance assumed a peculiar appearance. She gave no answer upon being called by name, but was attacked by most horrible convulsions. To describe these would be useless, since every textbook pictures them realistically. Though I had never before witnessed a case of puerperal eclampsia, I was absolutely positive that my time had at last come to battle with one of true-blue type. The pupils were much dilated; the pulse was full and bounding, and during the fit much accelerated in speed; the skin was hot and very dry. On another digital examination I was surprised at the intense heat in the vagina, which, but a few minutes before, was of a normal temperature.

This, the first fit, did not last long, and I gave about one quarter of a grain of morphine *per os*, having with me no hypodermic syringe.

Then, preparing a cone for chloroform-inhalation in anticipation of the next attack, the succeeding thoughts passed through my brain. Shall the patient, who is plethoric, be bled? The brain in this case is surcharged with blood, and the convulsions are surely not due to anemia of the brain, as some authors have it. And the full, bounding pulse and hot, dry skin also indicate bleeding. But bleeding would prove of only temporary benefit, since the volume of blood would soon be replenished from the fluids of the system at large, and its quality be deteriorated. Besides, the real cause may be uremia, or the pressure on the brain may be from extravasated blood; and is there not some danger from accidental

or post-partum hemorrhage especially in this case, under which the patient would succumb to the double loss of blood. So I determined, not without hesitancy, not to use venesection. I diagnosed that the first stage of labor had been going on for many hours, and that the membranes had ruptured prematurely, and from this arose the rigid os. The remote cause of the eclampsia was due to a poisonous condition of the blood attended with albuminuria or uremia, and the exciting cause the rigid os, or rather the uterine pains which were ineffectual in dilating it.

Another convulsion came on in about twenty minutes, ushered in by an awful imploring scream, which was soon hushed by the spasms in the throat. The bed actually rocked from the violence of the attack, but chloroform speedily subdued the symptoms.

A speedy delivery was the great desideratum, and so I sent for my brother, Dr. E. J. Kempf, whom I wished to consult. After an hour and a half he arrived. During this time the patient had five convulsions, which were speedily controlled by chloroform. In the intervals the patient was in a comatose slumber with stertorous breathing. The os had now dilated to the size of a silver quarter-dollar, though it was still rigid and thin edged.

The doctor agreed to my diagnosis. To enhance dilatation, an atropine ointment was applied to the os. We also succeeded in administering thirty grains of chloral-hydrate, for the double purpose of quieting the nerves and dilating the os uteri. For two hours the patient had not another fit—when one came with a vengeance. Chloroform once more did its work. The mouth of the womb, to which the atropine ointment had been frequently applied, was now found sufficiently dilated, and the pains were sufficiently regular and strong, to permit the use of forceps. This was nearly five hours after I had first seen the woman. Dr. E. J. Kempf applied the forceps, while I anesthetized the patient to the fullest extent. In some minutes a male child, weighing about eight pounds and crying lustily, was brought into the world. The placenta, by the combined method, was next easily removed, and the uterus contracted perfectly; whether or not in response to a good dose of the fluid extract of ergot after the patient had rallied somewhat, is a question.

Our hopes that the convulsions would not recur, were soon destroyed by an attack as violent as any preceding. The

usual remedy and afterward another dose of chloral-hydrate were administered.

My brother, having returned home, sent me a hypodermic syringe and a solution of sulphate of morphine, one half grain to the dram of distilled water. I injected one fourth of a grain, and for an hour the patient rested quietly. During this period the pupils were much contracted through the morphine. Now she opened her eyes and exhibited markedly dilated pupils and was again convulsed. Chloroform again having speedily arrested the attack, another one fourth of a grain of morphine was hypodermically administered. Thus a half grain, injected in one hour, was active in her system. The patient came under the influence of the opiate to the very dividing line of its therapeutic action and its dangerous poisonous action. Indeed, a slight convulsion, which occurred about an hour and a quarter after the last injection of the morphine, relieved my anxiety regarding its too powerful action. This attack, during which the pupils again were dilated, and after which they were again much contracted, was the last one. This was at half past one o'clock on the 13th day of February.

Through all this day, and the night before, the patient took not the slightest nourishment, and slept continuously excepting during the convulsive seizures. A hog-bladder partly filled with crushed ice kept the head in a cool and pleasant state. At seven o'clock in the evening she awoke. Her skin was no longer hot and dry, but a grateful moisture covered her entire body. She answered to her name, and swallowed some brandy and water. The crisis had come—the patient would recover.

Soon she expressed a desire to urinate, but did not succeed in doing so. I attempted to use the catheter, but her extreme irritability and resistance (she still seemed to wander mentally) caused me to desist, fearing that the dreaded convulsions with all their horrors would return. Finding the bladder not distended, and not wishing again to give chloroform (of which she had already inhaled over six ounces), I let nature, now rallying, act alone.

Leaving a mixture of potassium bromide and chloral-hydrate to be given at stated intervals, and ordering an occasional draught of milk alternated with brandy-toddy, I left the patient in care of her nurse.

Next morning I found that the woman had rested well, and that a copious discharge

of brown, ill-smelling urine had occurred. The chloral-hydrate was now discontinued, the potassium bromide being still given. Quinine in anti-febrile doses was ordered, and light, nourishing diet.

On the 14th of February, and on the two consecutive days, some fever occurred, which was checked by the more liberal use of quinine.

About two weeks afterward a pustular eruption broke out on both mother and child, though they were otherwise perfectly healthy. I ordered three grains of iodide of potassium with a tablespoonful of the compound syrup of sarsaparilla to be given to the mother thrice daily. The eruption has now almost entirely disappeared from both mother and child.

In conclusion the indulgent reader will allow me to point to the following facts:

The chloral-hydrate internally, and the atropine (about one half grain of the sulphate was applied) to the uterine cervix, hastened or even caused the dilatation of the os. While the chloroform alone was used very little dilatation could be appreciated.

The speedy delivery by the forceps, although the convulsions did not immediately afterward cease, saved indirectly the woman's life, and directly the child's. One third of the children in puerperal eclampsia are still-born if labor is left to nature. "Letting nature alone" is often used as an excuse by ignorant or too timid persons. "Meddlesome midwifery" is to be cavilled at; but none the less so is culpable negligence. By the earliest possible application of the forceps in this case no harm was done to either the mother or child, but great good.

The chloroform controlled each individual convulsive attack, and allowed other remedies of more continuous action to be administered.

The subcutaneous use of morphine was the main factor in curing the malady, and without it I think the woman would have died.

The case resulted favorably without venesection, which, though apparently indicated, might have done great mischief.

The patient was stout and full-blooded, of a nervous temperament, and a primipara.

Albuminuria, with anasarca of the head and neck and extremities, was present. What connection this had with the eclampsia I have not seen satisfactorily explained in any records.

The extreme heat in the vagina immediately before and after (inferentially) during the attacks is noticeable.

The convulsions set in at night. Many authors affirm this to be, as a rule, the case in puerperal eclampsia.

The dilatation of the pupils during the attacks points to pressure on the brain; but was in this case due to vascular disturbance.

Although not able positively to affirm it, I believe emphatically that the uterine muscles acted forcibly during the convulsions, and that each convulsive attack began with a new severe uterine pain. This would indicate that the irritation of the uterine nerves, carried or reflected to the great nerve-centers, was the immediate or exciting cause of each convulsion. I am suspicious that the subsequent eruption of the mother (the child contracting the same trouble from the mother through the milk) stood in some relation to the peculiar poisonous condition of the blood which (as most authors affirm) is ever present in puerperal eclampsia.

FERDINAND, IND., March, 1885.

Miscellany.

THE FREE USE OF CAUSTIC POTASH IN THE TREATMENT OF CANCER OF THE CERVIX UTERI.—Dr. Herbert Snow read a paper on this subject before the Medical Society of London (British Medical Journal), in which he reviewed the statistics of extirpation of the uterus, and showed the severe mortality which followed the abdominal or the vaginal operation. In many cases the *écraseur* was unable to remove the whole of the disease of the cervix uteri. The actual cautery had too superficial an action to be of any great service. Chloride of zinc caused much pain and distress, which lasted for a long time. These objections did not hold with regard to potassa fusa. Half an hour or an hour was recommended to be spent in the employment of successive sticks of potassa fusa, for the treatment must be thoroughly carried out. None of the cases suffered from peritonitis; and unless the patient get up too soon after the operation, nothing distressing need be feared. All the cases were greatly benefited, and no alarming symptoms were encountered. Fixation of the uterus and infiltration of the vaginal wall were regarded as prohibiting the employment of this method of treatment. It

was only by degrees that he had ventured to apply the caustic so freely as he now advocated. He illustrated the paper by narrating several cases in which the treatment had been adopted. The object of the paper was to show that *potassa fusa* could do all that the vaginal cutting operation could perform, without running the risk of the severe operation.

RECENT FRACTURE OF THE PATELLA TREATED BY SUTURE OF THE FRAGMENTS.—

The British Medical Journal says: A man, aged fifty-eight, having been admitted into the Liège Hospital for a transverse fracture of the patella with considerable displacement of the fragments and abundant effusion into the joint, Prof. von Winiwarter decided to perform the operation on the day following the accident. A longitudinal incision was made into the joint, and it was then seen that the space between the fragments was occupied by hard adherent clots, which had to be carefully removed. The joint was washed out with a two-and-a-half-per-cent solution of carbolic acid, and the fragments united by two wire sutures. A drainage-tube having been passed through small openings on both sides of the patella, the wound was dressed antiseptically and the limb placed in a plaster-of-Paris splint. No accident followed the operation, and on the seventeenth day the patient was able to walk about with crutches. The wound had healed by first intention, and the wire sutures had become encysted. Prof. von Winiwarter thinks that in young people fractures of the patella with moderate displacement of the fragments are to be treated by the ordinary means, but that under less favorable circumstances there is great advantage in uniting the fragments by wire sutures.

SECOND ATTACKS OF SCARLET FEVER.—

Dr. Jacob read a paper on this subject before the Leeds and West Riding Medico-Chirurgical Society (British Medical Journal). A child, aged two years, was admitted into the Fever Hospital with symptoms of scarlet fever, from which disease her mother was at the time suffering. After a slight attack the child was discharged perfectly well, there being no desquamation. A few days afterward she was re-admitted, suffering from very severe symptoms of a renewed attack—high fever, ulcerated throat, and convulsions—which rapidly proved fatal. The notes of a second case of precisely similar character had been given him by the kind-

ness of Dr. Blore, the resident medical officer of the Fever Hospital, which also ended fatally. In such cases it might be held: (1) That the diagnosis of either attack was incorrect. (2) That the second attack was a relapse, an auto-infection, such as was seen in cases of typhoid fever. (3) That the second attack was caught in the hospital; the first attack had given no prophylaxis. If this last alternative were the correct view, it would be important not to expose a very light case of the fever to the risks of a second infection.

MARION HARLAND describes a few good and wholesome nursery desserts in *Babyhood for May*, for mothers who are judicious enough to give their little ones such instead of rich cakes and puddings. Wm. P. Gerhard, C. E., contributes to the same number a practical talk on *Country Houses and their Surroundings*, exposing the false sense of security in which many families indulge merely because they do not live in the city. Were some of his suggestions heeded disease would make fewer raids in the nursery. Besides various other important topics which are treated in this issue, the readers of the magazine appear to vie with its editors in furnishing useful hints. Among the subjects dealt with in their letters and queries are Nicknames, A Special Room for the Baby, The Training of Mothers, Home-made Baby-tenders, Crying and Sedatives, Imaginary Fear, Jumping in Sleep, Feeding on a Journey, Toeing-in, The Shirt of Nessus, Oatmeal-Gruel, Early Impressions, etc. This journal is issued in New York, and costs \$1.50 a year.

HOLLOWAY—HOLLAND.—On the evening of the 14th inst. quite a notable event took place, in the way of a farewell supper given to Professor Holland by Professor J. M. Holloway, at the residence of the latter. The company present was quite a distinguished one. The law was represented by Garvin Bell and Lee Woolfolk, the city profession by Preston B. Scott and Coleman Rogers, the Louisville Medical College by Professors Kelley and Galt, the Kentucky School by Professors Holloway, Coomes, and Wathen, the Hospital School by Professors Bailey and Larrabee, and the University by Professors Anderson and Palmer. It is noticeable that the genial host ran the risk of the traditional unlucky thirteen at the table, as Professor Holland made the fourteenth of the party, but happily no one

invited failed to put in an appearance. Enjoyable as was the delicious *menu*, still more to be remembered with lasting pleasure was the universal good-fellowship that pervaded the assemblage as, midst the popping of corks and clouds of fragrant smoke, they pledged each other and their departing guest.

VARICOSITIES OF THE LINGUAL VEIN AS A DIAGNOSTIC SIGN.—G. Cecil Dickson, in British Medical Journal, says that under certain conditions, especially in elderly persons, the ranine and lingual veins become remarkably dilated and varicose; often they are much enlarged and present many bulgings which extend in a racemose manner to the edge of the tongue. From observation he believes that this condition indicates important changes in the vascular circulation. In two cases in which this condition was marked both eventually had cerebral hemorrhages. The lingual vein being a branch of the internal jugular will indicate the state of the blood current in this vein, and thus show the condition of the entire intracranial venous system. Distensions and varicosities of the lingual will thus become associated with passive congestion in the brain sinuses, and thus point out the diseases that are liable to occur when this condition is present.

THE EPIDEMIC OF TYPHOID FEVER IN PLYMOUTH, PA.—Dr. Herman M. Biggs (New York Medical Journal) has been investigating the outbreak of typhoid fever at Plymouth, Pa. He says the conclusion is scarcely avoidable that this epidemic was due to the contamination of the water in the reservoir by the stools of a single patient with typhoid fever, whose case occurred on the stream supplying the reservoir several miles distant from the town. The magnitude of the epidemic and the clearly defined relations existing between the first and the succeeding cases combine to make this one of the most instructive as well as one of the most terrible instances which ignorance and negligence have contributed to the records of disease.

GLUCOSIDE OF BOLDO AS A SUBSTITUTE FOR COCAINE.—The Paris correspondent of the Medical Record says that M. Laborde has found that the glucoside of Boldo in certain proportions produces ocular anesthesia as well marked and similar to cocaine.

OCULAR SURGERY.—Dr. Landolt, of Paris, begins this summer a course of practical lectures on operations on the eye. Should a sufficient number of American medical men desire to attend regularly, the Professor will take great pleasure in forming a separate class for them, before which the lectures will be delivered in English.

Prof. Landolt's address is 4 Rue Volney, Paris.

CANCER AND CIGAR SMOKING.—The Medical Record says that tobacconists in New York City admit that since publicity was given to General Grant's case, there has been a considerable falling off in the number of cigars sold in that city.

THE Missouri State Medical Association held its annual meeting in St. Joseph, May 12th, 13th, and 14th. Dr. G. C. Catlett, of St. Joseph, Superintendent of the State Insane Asylum, No. 2, was elected President.

THE chair of Anatomy in the University of the City of New York, made vacant by the death of Dr. William A. Darling, has been filled by the appointment of Dr. Lewis A. Stimson.

At the recent meeting of the Indiana State Medical Society, Dr. J. S. Greggs, of Allen County, was elected President, and Dr. E. L. Elder, of Marion County, Secretary.

THE death of Prof. Panum, of Copenhagen, the President of the last International Medical Congress, is announced to have taken place on the 3d inst.

DR. PORTER, of New York, recently exhibited specimens showing the bacillus of syphilis, thus confirming the discovery of Lustgarten.

THE University of Pennsylvania at its recent commencement conferred the degree of M. D. upon one hundred and eight graduates.

THE American Climatological Association held its second annual meeting in New York City, on May 27th and 28th.

DR. ROBERT KOCH has been appointed Professor of Hygiene in the University of Berlin Medical Faculty.

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THE DISINFECTED OBSTETRICIAN.

Before the Section of Obstetrics and Diseases of Women, at the recent meeting of the American Medical Association, Dr. George F. French, of Minneapolis, read a paper under the following title: How Soon after Exposure to Sepsis may the Accoucheur Resume Practice?

After stating that the septicemic variety of puerperal fever is caused by the contagia of erysipelas, scarlet fever, and septic dirt, and his belief that the evidence upon which this statement rests is as demonstrable as any proposition in Euclid, the author quoted the following letter of inquiry, a copy of which had been sent to some of the most distinguished medical men in this country and in Europe:

How soon after exposure to sepsis may the accoucheur safely resume practice? My purpose is to controvert the opinion which obtains in the profession that time is an essential element in the process. I have had an experience which emboldens me to make abdominal section on the day following the exposure. I greatly desire to know whether your own experience warrants me in pursuing such a course.

In reply, Thornton, Savage, and Hegar wrote that they believed time essential—to

be accompanied, of course, with careful cleansing—while Emmet, Battey, Marcy, Goodell, and Thomas, with Martin, Schroeder, Nussbaum, Volkmann, and Esmarch expressed the opinion that time was entirely non-essential, and that thorough disinfection could be at once accomplished.

The letter from Esmarch was characteristic, and epitomized the subject. He wrote:

If you have thoroughly disinfected yourself, you can immediately enter upon obstetric practice. Time does not destroy septic dirt.

As proofs of his confidence in his ability to accomplish absolute disinfection, Dr. French cited the following experiments:

June 21, 1884, after laying open a dissecting abscess of the thigh in a pyemic patient, and stripping the limb with both hands until they were offensively drenched with the pus, I carefully disinfected myself, and three hours later attended Mrs. M. in confinement.

July 22, in dealing with a case of pyonephrosis, before penetrating the kidney I came upon a foul perinephritic abscess. Passing through this, the kidney was incised, explored, and its grumous contents scooped out with the finger. The hand was so long engaged in this work that a more complete purulent saturation could hardly be conceived. In the afternoon of the same day I confined the wife of a physician, having stated to him the full extent of my morning exposure. In both cases the convalescence was perfectly normal.

February 11, 1885, I purposely infected my index finger with the ichor of an erysipelatous case, and after a corrosive-sublimite washing inserted it in a fresh wound from which I had just excised a tumor. Instances of this kind might be multiplied.

His method of auto-disinfection is thus described:

Particles of contagia most frequently find lodgment on our hands, and particularly under the finger-nails. It is always possible after the ordinary use of a nail-brush or knife to remove particles of dirt in which the microscope reveals living germs of possible infection. On this account I cut the nails short and swab under them with a blunt instrument covered with cloth and wet with some disinfecting liquid. I formerly used for this purpose five-per-cent carbolic acid, but this made the flesh crack, so I now use instead corrosive-sublimite solution, 1:2000. For hang-nails, cracks, and abrasions I use collodion.

The author quotes in full the letter written him by Prof. Volkmann, which might seem

to justify the above noted reckless behavior. The eminent German surgeon says:

A surgeon who disinfects himself well can, immediately after making a post-mortem, undertake any operation known to surgery. Every morning from six to eight during the summer I am obliged to give the students operations on the cadaver; and from ten to three I am busy in the hospital, operating, and dressing wounds. I have never yet infected a patient. In the winter I have no operations on the cadaver. Comparing my results in the clinic, I can assure you that the mortality in summer is not greater than in winter.

Those surgeons who do general practice, treating every thing from aneurism of the aorta to infantile colic, will take heart on reading Dr. French's paper, and pocket certain post-obit obstetric fees with less compunction of conscience now than heretofore, while those conservative physicians who never did believe in bacterial infection will now advertise their skepticism with louder laughter than they ever dared to make before. For it requires no more than a superficial survey of the propositions and experiments as laid down and detailed by Dr. French to show that they force upon us one of two inevitable conclusions, neither of which gives aught of strength to the theories of the germ-infectionist. The alternative is that the peripatetic microbe of pyemia, septicemia, erysipelas, etc., is not so deadly as supposed, or that the surgeon bears a charmed life.

It is not probable that the puerperal woman is physiologically any more susceptible to inoculation from septic matters than the non-puerperal woman or the man, though she may be more liable to infection, in that the area of recent placental attachment in her womb offers a large abraded surface for the entrance of microbes into her general circulation. But if any thing is proved by bacteriological culture and inoculation in animals, it is that the slightest scratch or puncture, if it be wide enough to let a single microbe slide under the skin, will serve most adequately as an avenue of infection.

In the light of these facts it is unreasonable

to suppose that a surgeon with visible abrasions and hang-nails upon his fingers, as Dr. French admits, with doubtless undiscovered hiatuses in the skin of his hands and fingers, could himself escape infection from any specific germs which, through his fingers after careful washing, would have inoculated the lying-in women.

It is by no means as demonstrable as very many points in pathology, to say nothing of a "proposition in Euclid," that such diseases as pyemia, erysipelas, and scarlet fever can engender puerperal fever in the parturient woman, though there is evidence enough upon the point to admonish the physician against submitting such patients to any possible risk from dirty or infected hands. But however moot may be the question as to whether puerperal fever be a secondary affection dependent upon the infectious germs of certain primary diseases or a disease having its own specific cause and character, the experiments of Dr. French leave it no less mooted, nor are they significant of any thing beyond the probable innocuousness of the matters in which he saturated his fingers and his own overweening faith in the antiseptic all-sufficiency of corrosive sublimate.

Bibliography.

Micro-Chemistry of Poisons, including their Physiological, Pathological, and Legal Relations; with an appendix on the Detection and Microscopic Discrimination of Blood. By THEODORE G. WORMLEY, M.D., Ph.D., LL.D., Professor of Chemistry and Toxicology in the Medical Department of the University of Pennsylvania. With ninety-six illustrations upon steel. Second edition. Philadelphia: J. B. Lippincott & Co. 1885. 8vo., cloth, pages 784. For sale by John P. Morton & Co. Price, \$7.50.

The appearance of the second edition of this masterly work has long been anxiously awaited by all who have reason to take interest in toxicology, for the first edition, though unique as a contribution to this branch of science, had been left behind in the rapid advancement which has characterized the chemistry of recent years. As to the character, scope, or arrangement of the work in general, it is needless for the

reviewer to speak, since no chemist, physician, or lawyer on this side of the world, who has aught to do with toxicology, is unfamiliar with Wormley.

Among the noteworthy features of the new edition are, a discussion of chlorate of potassium poisoning; post-mortem diffusion of arsenic; arsenic in medicines, in fabrics, and in glass. In reference to the latter the author mentions in a note, that since the text on this subject was in print he has examined the glass of some American beakers which contained 0.34 per cent of metallic arsenic. This, however, is not seriously to the discredit of American glass, since the author was able to find it in some specimens even of Bohemian manufacture, one sample yielding 0.314 per cent. At first sight these facts would seem to be seriously in the way of the chemist who might be hunting for arsenic in fields which promise but a small harvest. But the author gives the comforting opinion "that there would be little or no danger of arsenical glass yielding up any of the metal in the ordinary application of Marsh's test." Solutions of ammonium hydrate and ammonium sulphide, various neutral reagents, and concentrated mineral acids kept in bottles of arsenical glass for long periods (some for more than three years), failed to take up a trace of arsenic. On the other hand, it was found that sodium and potassium hydrate would become contaminated in a few days. This is a hint in time to any chemist who may be fond of Fleitmann's test.

Among other additions, are Dragendorff's method for the recovery of vegetable principles; the nature of ptomaines, and the preparation, properties, and recovery of jervine. A new chapter is given on gelseminum poisoning, and an appendix on the nature, detection, and microscopic discrimination of blood. The original text has been much amplified by the incorporation of new methods for the recovery of poisons from organic mixtures, and the introduction of many new illustrative cases of poisoning.

The nomenclature of the new chemistry is of course adopted, but the author shows how hard it is to escape the influence of fixed habit by the occasional use of terms which point out too clearly the line of his difficult descent.

The English system of weights and measures is retained; but since the amounts estimated are expressed always in some decimal fraction of the grain, this sop to Cer-

berus is not likely to prove a cud too bitter for the chemist's classic taste.

Two new steel plates illustrative of the crystalline forms of morphia iodide and m. iodohydrargyrate, jervine, gelseminum, gelsemic acid, with hemin crystals under high powers, have been added. These are executed with that infallible truth to nature, in clearness of definition, gracefulness of delineation, and delicacy of shading, which marks the matchless work of Mrs. Wormley.

A third plate, giving the comparative sizes of the blood corpuscles of the man, dog, mouse, ox, sheep, and goat, as they appear under a magnifying power of 1,150 diameters, with the actual diameter of each expressed in fractions of the inch, is another striking and valuable addition to the work. The study of the blood, as set forth in the appendix, is very interesting, and may be regarded as the most complete investigation of the comparative micrometry of mammalian blood corpuscles extant. As is well known, Professor Wormley has devoted a number of years to this important work, in which he had for some time the efficient help of Professor Leo Mees. Other observers have joined in the work, but priority, we believe, and certainly the chief honor attaching to it belong to the author.

Out of research in what once seemed a barren field have come facts of large physiological interest and most important medico-legal bearing, as seems warranted by the following conclusion.

After a most searching study of the bloods of forty different mammals, and a comparison of the measurements of Professor Gulliver (extending over about the same ground) with his own, the author says, "that a microscope may enable us to determine with great certainty that a blood is *not* of a certain animal and is *consistent* with the blood of man, but in no instance does it, in itself, enable us to say that the blood is really human, or indicate from what particular species of animal it was derived."

Elements of Practical Medicine. By ALFRED H. CARTER, M.D., London, Member of the Royal College of Physicians, London, Physician to the Queen's Hospital, Birmingham, etc. Third edition. New York: D. Appleton & Co. 1885. For sale by John P. Morton & Co.

As a hand-book for the practitioner, or an introduction to the study of medicine, this work can not fail of good service, since in it the author brings out the essential features

of each disease, its pathology, clinical history, diagnosis, prognosis, and treatment with singular felicity of description and remarkable condensation of text.

The popularity of the book is attested by the fact that three editions have been called for in less than five years. It is arranged in nine sections, in which are discussed systematically, General Pathology, General Diseases, Diseases of the Respiratory System, Diseases of the Circulatory System, Diseases of the Alimentary System, Diseases of the Urinary System, Diseases of Nervous System, and Diseases of the Skin.

The book is made still more serviceable by the free use in its pages of tables for the classification of diseases of certain types and for the making clear of points in the differential diagnosis of such affections as may have similar general characteristics. A full therapeutic index, giving in well-made formulæ such medicines as the author finds useful in practice, also contributes to the practical value of the work.

The Science and Art of Surgery. A Treatise on Surgical Injuries, Diseases, and Operations. By JOHN ERIC ERICHSEN, F. R. S., LL. D., F. R. C. S., Surgeon Extraordinary to Her Majesty the Queen, etc. Eighth edition. Revised and edited by Marcus Beck, M. S. and M. B. Lond., F. R. C. S., Surgeon to University College Hospital, etc. With 984 engravings on wood. Vol. II. Philadelphia: Lea Brothers & Co. 1885. For sale by John P. Morton & Co.

It will be recollected by our readers that on the receipt of the first volume of this standard work we dwelt at length upon several of those important topics which necessitate new editions of old books, and are fitting themes for the reviewer. Since the second volume proves itself to be in every part consonant with the original plan of the reviser, it is not necessary that we should do more than indicate the nature of its contents.

This volume continues and concludes the author's discussion of surgical diseases and deformities and the various operative procedures which look to their relief. The author's failure (unavoidable, because at the time of its presentation the book was already in press) to treat of corrosive sublimate as a germicide in his admirable chapter on antiseptics in the first volume is made good by an appended chapter to the second which does the subject full justice.

The American Eagle, devoted to the American Exhibition of Arts, Inventions,

Manufactures, Products, and Resources of the United States. May 1, 1885. Vol. 1, No. 3. Office, No. 7 Poultry, London, E. C.

A Case of Psycho-Sensory (Affective or Moral) Insanity. By C. H. Hughes, M. D., St. Louis, Mo. Reprint from the *Alienist and Neurologist*, April, 1885.

Transactions of the New York State Medical Association, for the year 1884. Volume 1. Edited for the Association by Austin Flint, jr., M. D., of New York County. New York State Medical Association, founded 1884. New York: D. Appleton & Co. 1, 3, and 5 Bond Street. 1885.

The Public Herald, Philadelphia, April, 1885. Lum Smith, editor and proprietor. 706 Chestnut Street. This monthly seems to be doing good work in exposing quacks. Especially has it shown to the public the true character of "Dr. Lightfoot," the "Indian Doctor," who has visited in days ago many of our southern and western towns.

The Year Book of Treatment for 1884. A critical review for the Practitioners of Medicine and Surgery. Contributors, J. Mitchell Bruce, M. D., T. Lauder Brunton, M. D., F. R. C. S., Thomas Byrant, F. R. C. S., F. H. Champneys, M. B., Alfred Cooper, F. R. C. S., etc. Philadelphia: Lea Brothers & Co. 1885. For sale by John P. Morton & Co.

A Treatise on Amputations of the Extremities and their Complications. By B. A. Watson, A. M., M. D., Surgeon to the Jersey City Charity Hospital, to St. Francis's, and to Christ Hospital at Jersey City, N. J., etc. Illustrated by upward of two hundred and fifty engravings and two full-page plates. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1885. For sale by John P. Morton & Co. Price, \$5.50.

The Southern Journal of Health. A popular Monthly devoted to Climate, Hygiene, and Sanitary Science. Editor, Horatio P. Gatchell, M. D. Vol. 1, No. 1. This is a monthly of sixteen pages published at Asheville, N. C. It contains practical suggestions and short articles, mainly devoted to household sanitation and the relations of climate to health, having for its aim to teach how to avoid disease and not how to combat it after it has invaded the household.

Bacterial Pathology. A series of papers on the Exhibits at the Biological Laboratory of the Health Exhibition, under the charge of Watson Cheyne. Reprinted from

the London Lancet. Illustrated with over thirty engravings, showing the appearance of the Bacteria, and the apparatus used in preparing and cultivating them. New York: The Industrial Publication Company. 1885. Price, twenty-five cents. For sale by John P. Morton & Co.

Clinical Studies on Diseases of the Eye, including those of the Conjunctiva Cornea, Sclerotic Iris, and Ciliary Body. By Dr. Ferdinand Ritter Von Arlt, Professor of Ophthalmology in Vienna. Translated by Lyman Ware, M. D., Surgeon to the Illinois Charitable Eye and Ear Infirmary; Ophthalmic Surgeon to the Presbyterian Hospital and to the Protestant Orphan Asylum, Chicago. Philadelphia: P. Blakiston, Son & Co., No. 1012 Walnut Street. 1885. Price, \$2.50. For sale by J. P. M. & Co.

The Curability and Treatment of Pulmonary Phthisis. By S. Jaccoud, Professor of Medical Pathology to the Faculty of Paris; Member of the Academy of Medicine; Physician to the Lariboisière Hospital, Paris; etc. Translated and edited by Montagu Lubbock, M. D. (London and Paris), M. R. C. P. (Eng.), Assistant Physician to Charing Cross Hospital, and to the Hospital for Sick Children, Great Ormond Street, London. New York: D. Appleton & Co., 1, 3, and 5 Bond Street. 1885. For sale by John P. Morton & Co.

Messrs. P. Blakiston, Son & Co. announce that the Medical Directory of Philadelphia, Pennsylvania, Delaware, and the southern half of New Jersey, is ready for 1885. It is believed that this book is as complete as it is possible to make a volume of the kind. The utmost care has been taken to make the lists correct. The Philadelphia list of physicians alone contains nearly 1,900 names, 250 more than have ever appeared in any previous Medical Directory, and the State lists are much larger than any hitherto published. It contains 10,000 reliable names. 397 pages. Full morocco, gilt edges, \$2.50.

It is rumored that Dr. W. H. Pancoast has tendered his resignation of the chair of Anatomy in Jefferson Medical College, Philadelphia.

PROF. HENLE, the great anatomist of tubal fame, died in Berlin, on the 18th inst.

Correspondence.

PARIS LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

With reference to your editorial remarks in the NEWS of the 18th ultimo, on the action of cocaine, I may add those made by Dr. Dujardin-Beaumetz at a recent meeting of the Société de Thérapeutique, which may "serve as a warning to those who fail to use the drug without accurate knowledge of its power and an eye single to its physiological effects." Dr. Dujardin-Beaumetz stated that cocaine is neither caustic nor toxic; it should, however, be employed with great circumspection; and, notwithstanding the opinion of some medical men to the contrary, the strength of the solution for mucous membranes should never exceed two per cent, and that for the skin five per cent. When used hypodermically the injections should be performed with the patient in the horizontal position to prevent any ill effects which might occur, as has been the case with the author under the following circumstances: In experimenting on themselves, Dr. Dujardin-Beaumetz's preparator and the chief of his laboratory were both affected with syncope by the injection of a rather strong solution of the hydrochlorate of cocaine. (It is a pity that the author has not given the strength of the solution.) In his private practice, Dr. Dujardin-Beaumetz observed two cases similarly affected, and, in a third, the patient experienced indescribable sensations accompanied with cerebral excitement, ideas of greatness, delusions of being taken up in the air. All these accidents were only temporary and always happened to the patients when the injections were performed in an upright position. It is curious to note, added the author, that the strength of the solution of the cocaine did not seem to have any influence in producing these results, as the same phenomena were observed with two centigrams and ten centigrams. The conclusion was that the vertiginous accidents resulted from cerebral anemia, for when the patients lay in the horizontal position at the time of the injection nothing of the kind was observed.

Dr. Lacroix lately published, in the *Bulletin Médical du Nord*, some interesting remarks on the cure of acute meningitis with ergotine. Having been encouraged by the success of this treatment in one case, he was induced to try it in others, and the re-

sults were equally successful. He based the treatment on the fact, that in acute meningitis the smaller vessels of the pia mater are hyperemied, and consecutively the production of exudations takes place. Ergotine producing contractions of the smooth fibers, their elasticity returns, and the flow of the blood being resumed the stasis and congestion disappear. Consequently, if before the appearance of exudations ergotine be administered, the chances are in favor of the cure of the meningitis. The dose recommended by the author is one to two grams in children up to four years of age, and three to four grams in the adult, in the twenty-four hours.

Professor Pécholier, of Montpellier, lately presented at the Academy of Sciences an interesting paper on the antizymasic action of quinine in typhoid fever. After having brought to the recollection of his hearers that for twenty years he has taught that typhoid fever is due to an organized ferment, the evolution of which can be arrested by creasote, carbolic acid, sulphate of quinine, he stated that the method which seemed to answer best was to commence by the administration of the sulphate of quinine as soon as there was the slightest suspicion of typhoid fever, in doses of eighty centigrams to one gram daily during the height of the fever, which was gradually decreased until complete defervescence had taken place. To give larger quantities of the alkaloid he considered dangerous. The virtues of quinine have already been taken advantage of and applied to the ferments of intermittent fever, miliary fever, and puerperal fever.

Dr. Dehenne made a very important communication at the recent Congress of French Surgery on the influence of traumatism in ocular surgery on impaludism. He related a case in which he operated for cataract. The result being unfavorable he searched for the cause, and learned that the patient was the subject of malarial fever. He then administered the sulphate of quinine; an improvement almost immediately took place, and the patient soon got well. This case is a volume in itself, and would seem to suggest the necessity of inquiring, in cases of failure in operative surgery, whether ocular or general, as to the existence of impaludism in patients operated on and to administer the sulphate of quinine, the reputed specific for such an affection.

The *Courier Médical* has reproduced an article from the *Archives Médicales de Belges*, by Dr. Petitjan, on the simultaneous admin-

istration of the iodide of potassium and mercury in the treatment of syphilis. The author remarked that when he administered the iodide of potassium to a syphilitic patient, and that after a few minutes he injected subcutaneously a solution of the bichloride of mercury or of mercuric peptone, salivation set in in a very short time, and sometimes even after the administration of a single small dose. At the same time he remarked that the existing syphilitic manifestations disappeared much more quickly than when the iodide of potassium and the mercury were given separately. The same results were observed when the iodide of potassium was administered internally, and the mercury applied endermically at the same time, which is effected by the application of a mercurial ointment on the skin, the part having been previously made raw by means of a blistering plaster. The author mentions seven cases of syphilis, one of which was severe syphilitic paralysis, in which this mode of combining mercury and iodide of potassium had given him the most satisfactory results.

PARIS, May 15, 1885.

MURIATE OF COCAINE.

Editors Louisville Medical News:

The extraordinary power of cocaine salts to allay sensibility of the eye and produce local anesthesia of its membranes has induced the profession to make a trial of its effects in minor surgery. The surgeon will hail the advent of a remedy that can be substituted for more powerful anesthetic agents, especially if his patient be suffering from some of those cardiac or pulmonary troubles that render chloroform and ether so dangerous.

The following report, which illustrates the effect of cocaine as a local anesthetic, may be of interest to the surgeon:

Mrs. Lyon, aged seventy-eight years, had suffered with epithelioma of the lower eyelid for three years, extending from the internal to within a few lines of the external canthus. The growth had greatly thickened the mucous membrane, while the external surface presented that worm-eaten appearance so characteristic of this form of cancer. Having a fatty heart, the more powerful anesthetics were contra-indicated, and I determined to give the muriate of cocaine a trial. I dissolved three grains of the salt in one half dram of water.

The application was made with a camel's-hair brush to the internal and external surfaces of the lid consecutively. Three applications were made in ten minutes. The lid was then strongly everted, and an excision made through the mucous membrane and the orbicular muscle, removing the entire growth. No pain, or at least very little, was experienced during the entire operation. Nor was there any pain or soreness following. The wound healed nicely, leaving but little deformity.

Incident to this operation I made the following observation on the eye: In five minutes after the use of the cocaine the cornea began to lose its sensibility, and in ten minutes the eye could be handled without pain or irritation. The conjunctiva was longer losing its sensibility—about ten minutes before I could seize it with a pair of forceps without pain. It was further noticed that in from three to five minutes the pupil began to dilate. I failed to note the time during which the pupil remained dilated. The anesthetic effect seemed transient, being nearly lost in from twelve to fifteen minutes. The drug produces not only complete anesthesia of the mucous membrane, but it also impairs the movements of the lids and eyeball. T. M. KYLE, M. D.

MANCHESTER, IND.

Selections.

FUNCTIONAL DISTURBANCES OF THE EYES FOLLOWING DIPHTHERIA OF THE FAUCES.—Herschel (*Jahrb. f. Kinderh.*): The disturbances of vision which follow diphtheria, in so far as they depend upon paralyses of the motor portion of the optical apparatus, have been observed many times from the days of Donders, and a knowledge of them is a common thing. The author has been in a position, however, in cases in which the proof of pre-existing diphtheria was not always conclusive from other sources to discover disturbances of accommodation and a narrowing of the field of vision, which could only be referred to changes in the perceptive portion of the optic apparatus. Such a condition obtained in a girl, ten years of age, in whom asthenopic trouble had begun so that she was able to read with the left eye only Jaeger No. 11, and that with great difficulty. Ten days later she could read only No. 6, with both eyes, and soon afterward the energy of accommodation became still more feeble.

Further, the movements of a hand before her eyes fixed in straightforward vision upward, downward, and sidewise, were not perceived. All evidences of irritation were wanting, and the retina appeared to be normal. Soon after this the power of accommodation improved and with it the field of vision became enlarged, so that in three and one half weeks the condition was normal again. Twelve other cases which were examined with Foster's perimeter gave evidence of disturbance of accommodation of a diphtheritic character. Four of them showed concentric limitations of the field of vision, without susceptibility to dazzling illumination. In all cases the accommodation trouble was not exaggerated, there was no central scotoma, nor disturbance in the sense of color. The treatment which was recommended for the diphtheritic paresis of accommodation consisted in the use of a one-half-per-cent-solution of salicylate of physostigma by instillation once or twice a day. No curative influence can be expected from eserine. Among French writers preparations of belladonna are highly esteemed.—*Archives of Pediatrics*.

CHLORATE OF POTASSIUM.—Dr. J. von Mering has carried on, in H6ppe-Seyler's laboratory, an elaborate experimental investigation into the physiological, therapeutic, and toxicological actions of chlorate of potassium. He finds that the salt, under the influence of carbonic and probably of other acids, is decomposed in the system with the gradual liberation of chloric acid, which tends to reduce the alkalinity of the blood; and in this lies the key to the right understanding of the action of the chlorate. The author discriminates between acute and subacute poisoning by the chlorate. In acute cases, such, for instance, as result from the administration of one large dose of the salt, death results in the course of a few hours from decomposition of the blood, with symptoms of severe vomiting, profuse diarrhea, intense dyspnea, cyanosis, and profound cardiac depression. On section, there is found a chocolate-brown color of the blood, while the organs generally, especially the kidneys, are relatively little altered in appearance. The blood contains the stored-up products of its decomposition (methemoglobin, etc.) With a less acute form of poisoning death results, not simply from an accumulation of oxidation-products in the blood, but from an accumulation of these in the organs, especially the kidneys,

leading to occlusion of the tubules, scanty urine, and uremia. The following symptoms and appearances are observed: grayish-violet petechiæ, icterus, accumulation of hemoglobin in the blood, changes in the red corpuscles, dyspnea, and cardiac depression; gastro-intestinal disturbances, such as profuse diarrhea and severe vomiting, the vomited matter being generally greenish black, and enlargement of the liver and spleen. Functional alternations in the kidneys, such as anuria, occur, the scanty, turbid urine having a reddish-brown or black color, and exhibiting the spectra of methemoglobin and hematin, and being also highly albuminous. It also contains numerous detritus-masses of red blood-corpuscles, in the form of brown cylinders or brownish-yellow flakes. Uremic complications, such as delirium, coma, severe vomiting, tonic and clonic convulsions, and rigidity of the limbs, are observed. The subjective phenomena are headache, anorexia, tenderness of the stomach on pressure, pains in the hepatic and lumbar regions, intense oppression of the chest, and a feeling of extreme weakness. Post-mortem examination reveals the characteristic chocolate hue of the blood and the presence of methemoglobin in it; but sometimes these phenomena are absent, especially when the patient has long survived the administration of the poison, or when the necropsy has been delayed for several days. The spleen, liver, and kidneys are considerably enlarged, and filled with the accumulated brown products of destruction of the red blood-corpuscles. The greatest alteration is observed in the kidneys, in which both the straight and convoluted tubules are filled with brownish masses, partly cylindrical, partly irregular in shape. The osseous marrow is brown, and contains numerous decomposed blood-corpuscles. The gastric mucous membrane is swollen and ecchymosed.

While the majority of instances of poisoning by chlorate of potassium (cases in which icterus and scanty secretion of reddish-brown urine occur) terminate fatally, this has not been invariably the case. A chronic poisoning by the salt is incredible, and it has been observed that the prolonged ingestion of small doses has been followed by no injurious results; but the condition of the stomach, whether empty or full, and the degree of alkalinity of the blood greatly influence the result. The use of the chlorate in febrile affections, where there is subnormal alkalinity of the blood, is to be avoided;

and the author very emphatically condemns, as especially dangerous to life, the internal use of the salt in large doses in the treatment of diphtheria. The author gives the following as the maximum safe doses, when the use of the salt is not contra-indicated: for adults, thirty-grain doses, with a daily maximum of two drams; for children, aged ten to fourteen years, one dram daily; for children aged one to ten years, thirty to forty-five grains daily; and for infants, not more than fifteen grains daily, always given in divided doses.—*Boston Medical and Surgical Journal*.

A STUDY OF THE SUBJECT OF SPONTANEOUS RUPTURE OF THE MEMBRANES AT FULL TERM OF GESTATION PRECEDING THE BEGINNING OF LABOR.—Dr. G. W. H. Kemper, of Muncie, Indiana, in the April issue of the *American Journal of the Medical Sciences*, offers a careful study of fifty cases of spontaneous rupture of the membranes, occurring in his first seven-hundred obstetrical cases, and he finds that—

1. The spontaneous rupture of the membranes at full term of gestation, and preceding the beginning of labor-pains, is an event of common occurrence, averaging about once in every fourteen labors.

2. When the membranes are broken, as a rule, labor supervenes at once, or within the next four hours, but may be delayed several hours, days, or even weeks.

3. When such an accident occurs, the duration of the labor is not necessarily prolonged, nor rendered more painful.

4. The mortality of the mothers is not augmented, and the ratio of still-born children, if at all, is so slightly increased as to amount to a minimum.

5. The causes are not well defined. The repetition of the accident in certain women shows that with some a tendency is inherent. A possibility of atmospheric influences, especially a low temperature, as an exciting cause is admissible. Smellie considered obesity a cause. His observations have not confirmed this statement.

6. It is probable that the duration of labor is shorter in cases where the appearance of pains is delayed for some time after the membranes are ruptured.

7. The proper plan of treatment, as given by Smellie, McClintock, Bard, Denman, and Dewees, and corroborated by Dr. Kemper's experience, is rest, if necessary in a recumbent posture, and patience. All efforts to excite labor-pains are hurtful, meddlesome,

and mischievous. Wait for pains, and treat the case on general principles!

8. Finally, that the fear of delay and danger in this class of cases—the classical “dry labor”—promulgated by our early obstetrical fathers, and indorsed by successive authors generally, is based on a merest spark of truth, and is one of those medical traditions that experience shows to be overestimated and to a large degree apocryphal.

ANTIPYRINE IN TYPHOID FEVER.—Dr. J. E. Newcomb gives, in the *Weekly Medical Review*, an account of the use of antipyrine in eight cases of typhoid fever at the Roosevelt Hospital, N. Y. The conclusions he draws are as follows:

1. We have in antipyrine a remedy which will reduce temperature quickly and decidedly. After a dose of thirty grains the fall may amount to four degrees in as many hours; the effect lasts from four to twenty-four hours.

2. The pulse and respiration are practically unaffected, except in some cases the vascular tension is increased.

3. Sweating generally follows the administration of the remedy. It is sometimes profuse, but does not seem to weaken the patient or render him uncomfortable. The sweat itself has no peculiar physical properties.

4. An eruption is sometimes noticed. Its nature is erythematous. Rarely does desquamation follow.

5. Antipyrine does not in any way rival quinine as an antiperiodic or tonic.

6. It must be used carefully in depressed states. Untoward effects have resulted from its use.

7. It is easily administered and generally retained. It is about fifty per cent more expensive than quinine.

In regard to its future influence on mortality in disease we can do no better than to quote the words of Rank. He says: “We hope that the fanatic of antipyresis, who wages the onset against this one symptom, will finally be brought to the conclusion that therapy has a far weightier task than the production of inflections as deep as possible in the temperature curve. Whether the antipyrine treatment is in a position to lessen the dangers which threaten fever patients can scarcely be answered as long as we do not know how far the symptom (the subjection of which this method of treatment arrives at) is on the whole of deadly influence on the system.”

FARADISM IN THE TREATMENT OF ARRESTED AND DEFICIENT LACTATION.—Dr. Henry F. Campbell, in an article in the *Atlanta Medical and Surgical Journal* on this subject, concludes as follows:

First. That from a consideration of the varying locality of the mammary gland upon the trunk of the several genera of mammalia, the nervous supply being furnished indifferently by any portion of the central spinal system—the object and the efficiency of the secretion being the same in all of them as in man—and especially from the known fact that anomalies in women have transferred the gland to abnormal localities, as the groin, etc., it may be decided that the neurodynamic excitation in the mammae of the human female is of the simplest nature, and no other than that under which the functions of the integument, as sensation and secretion, are accomplished.

Second. After the foregoing conclusions in regard to the simplicity of the neurodynamic influences concerned in the function of lactation, and in the light of the experience of the cases herein reported, we may reasonably expect the stimulus of a well selected and judiciously applied electric or galvanic current to prove, in many cases of arrested and deficient lactation, a hopeful and often an efficient therapeutic measure.

OPIUM IN THE TREATMENT OF INSANITY. The use of this drug in treating the insane has been alternately extolled and condemned. Many of the older insane-hospital superintendents have used it through thick and thin, passing through the chloral, bromide of potassium, hyosciamine, and other sedative waves comparatively untouched. The utility of small doses of opium or morphia in melancholia has been generally recognized, and this plan of treatment pursued when the drug was used in no other way.

Within the last year or two, however, the opium treatment in all forms of insanity has shown a new lease of life, and Dr. H. Engelhen, among others, speaks of it in the highest terms. Narcotics to overcome the condition of pain of all kinds are of the highest importance, and opium is the first and best of all of these.

There have been many failures in the hands of physicians who have seen little of mental diseases and do not carry out the opium treatment thoroughly.

Schüle, at Illenau, has had great success with injections of morphia, more particularly in cases of melancholia. The injection

plan of morphia has a certain amount of fashion and prestige about it, but is not so well adapted for cases in private practice. Neither is morphia so successful in overcoming mental and physical irregularities as opium with its numerous alkaloids, and Dr. Engelhen gives up the injections in hospital treatment. The advantage of opium consists largely in its easily recognized tonic and nutritive properties.

In some cases improvement immediately takes place, in others it is much protracted. Many cases have been recorded where improvement was marked from the first dose. Dr. Engelhen has seen no case where improvement has not taken place.

The dose should be great enough to produce a light but decided narcotic effect. A dose of this sort lessens the neuralgic pain, so often present, as well as the feeling of weariness.

In most of the cases of the cerebral neuroses, two to three tenths of a gram given daily in divided doses will be a sufficient quantity. In some cases of extreme violence or very intense melancholy larger doses for a short time may be necessary.

When the proper sized dose has been found the treatment must be persisted in until complete recovery is nearly reached, and then the dose can be diminished gradually, great care being exercised in so doing. First, the dose may be lessened by a quarter or a third, the patient being then carefully watched for a period of eight days. If no ill effect is observed, a slight further reduction may be made. If at any time a relapse is observed, the dose must be increased to the next highest dose. Small doses are of no effect. Large doses given twice daily are alone of any service.

With great excitement the opium will not produce sleep until it has produced an effect on the brain irritation. In such cases sedatives, such as chloral, given for a few nights in moderate doses, may be necessary.

An equally strong indorsement of the virtue of morphia is found in the recent observation of Auguste Voisin. He has persisted in the opium and morphia treatment of insanity since 1867. His success was first interfered with by the obstinate vomiting, but learning from Roller that notwithstanding the dose must be increased, he was ultimately successful. He has treated mania, melancholia, criminal insanity, and moral insanity with good results. He uses the hydrochlorate of morphia hypodermically.

In the initial dose, he does not exceed

one, two, or three milligrams. Light cases are sometimes relieved by a daily dose of five or six centigrams, but in other cases the dose has to be increased to seventy centigrams a day.

The influence of the medicine is shown by redness of the face and conjunctivæ, nausea, vomiting, general sensation of heat, lassitude, sleep, loss of weight, diminution of arterial tension. Later the color improves and there is a gain in weight.

The presence of a congested condition of the cerebro-spinal system presents an absolute contra-indication to the use of morphia, as well as epilepsy and general paralysis.—*Boston Medical and Surgical Journal.*

MEASUREMENT OF REFRACTION BY THE SHADOW-TEST OR RETINOSCOPY.—In an excellent article in the April number of the American Journal of the Medical Sciences, Dr. Edward Jackson, of Philadelphia, traces the history of the shadow-test from its introduction ten years ago by Cuignet, of Lille, to the present time. He fully describes the optical basis of the test, and considers its application in the various states of refraction. It may be looked upon as the union and evolution of two modes of examination almost as old as the ophthalmoscope itself, namely the twirling of the mirror to detect conical cornea, and the examination of the myopic eye by the indirect method without the intervention of an object lens.

Its advantages are that it is most widely applicable, has the certainty of an objective method, the accuracy of trials with test-lenses, and the rapidity of the optometer. It is applicable in the cases of young children, the amblyopic and malingersers, in which subjective tests can not be used; and in cases where restlessness, nystagmus, hazy media, or the loss of the other eye, render accurate examination in the erect image by a refraction ophthalmoscope difficult or impossible. In certainty, when the patient retains the power of accommodation, it seems inferior to the "direct method" as a means of discovering and measuring latent hypermetropia. But it is superior to the direct method in the detection and estimation of astigmatism.

In accuracy, the test very nearly equals the subjective test with trial lenses, for patients who have good vision, good intelligence, and honesty; for patients lacking in any of these requisites for subjective testing, it is markedly more accurate than any other method. In all cases where the state of re-

fraction is to be measured accurately, it effects a saving of time; in the stupid or sluggish this saving is very great.

PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF WITCH-HAZEL.—Dr. Hector Guy, of Paris, France, after a thorough study of the physiological and therapeutical action of hamamelis (witch-hazel) makes the following deductions (Boston Medical and Surgical Journal):

1. Hamamelis Virginica is not toxic. Employed in very large doses it produces no symptoms of poisoning in the inferior animals. It does not appear to be toxic to man, despite the fact recorded by Dr. Camperdon, concerning which there would seem to have been some mistake.

2. It does not appear to have any special physiological action on the vascular system, heart, veins, and arteries.

3. We have not noted any alkaloid in the bark or leaves; the active principle is probably the essential oil.

4. Therapeutically hamamelis has an uncertain action. It has, nevertheless, given good results in certain cases of hemorrhoids. As a hemostatic its action has seemed demonstrated in some circumstances. The results obtained in varices are not conclusive.

5. Hamamelis Virginica does not seem to merit the enthusiasm bestowed on it by certain American physicians. It has no clearly defined special action. At the same time, in certain cases, its employment may be attended with success:

THE TREATMENT OF COMPOUND FRACTURES BY WIRING AND DRAINAGE.—Dr. W. P. Verity, of Illinois, read a paper before the American Medical Association at New Orleans on the treatment of compound fractures by the above method. He claims the following advantages for this method of treatment:

1. All points of bone and injured tissue fragments likely to act as irritants are removed.

2. It is obvious that, as a rule, there can be no shortening.

3. No extension is needed, and thus the necessity of complicated apparatus, which too often interferes with proper antiseptic dressings, is done away with.

4. Proper retention of the fragments in place is presumably secured, thus avoiding any possible danger of the fragments overriding and irritating the soft tissues.

5. The bones unite more quickly for

reasons which will be obvious when the principles which underlie all procedures to secure union of ununited fractures are recollected.

6. Drainage, besides its other advantages, prevents extension of the inflammation.

A CONTRIBUTION TO THE PATHOLOGY OF MALARIAL FEVER.—Drs. W. T. Councilman and A. C. Abbott, of Baltimore, report, in the April number of the American Journal of the Medical Sciences, two cases of malarial coma, with post-mortem examination, of special interest, in connection with which was the presence of small hyaline masses in the brain and elsewhere. The authors fully consider the arguments pertaining to the supposition that these hyaline bodies are living organisms without being able to arrive at any definite conclusion.

With a view of shedding some light on the subject of lower organisms in malaria, they made a careful search for the bacilli of Klebs and Tommasi-Crudeli, and for any other lower organisms in all of the cases of malarial fever which came under their observation on the post-mortem table. In no case were any bacilli, bacteria, or micrococci found. Only in these two comatose cases, which they have fully described, were the singular hyaline bodies found.

This is an argument against the probability of these hyaline bodies being micro-organisms. They can not suppose the comatose form of malarial poisoning to be a special disease, and were a lower organism found in this, it should also be found in other cases.

ARMY MEDICAL INTELLIGENCE.

OFFICIAL LIST of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army, from May 17, 1885, to May 23, 1885:

Captain A. A. DeLoffre, Assistant Surgeon, relieved from duty at Ft. Sisseton, D. T., and ordered to Ft. Totten, D. T. (S. O. 52, Dep't Dak., May 14, 1885.) *Captain Louis Brechemin*, Assistant Surgeon, ordered for temporary duty at Ft. Omaha, Neb. (S. O. 44, Dep't Platte, May 18, 1885.) *First Lieutenant Benj. Munday*, Assistant Surgeon, relieved from duty at Ft. Klamath, Oregon, and ordered to Ft. Walla Walla, W. T. (S. O. 72, Dep't Col., May 12, 1885.)

OFFICIAL LIST of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service for the week ended May 23, 1885:

Mead, F. W., Passed Ass't Surgeon. Detailed as member of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service. May 18, 1885.

THE DIOPTRIC SYSTEM AND ITS RELATION TO THE OLD SYSTEM OF NUMBERING LENSES.

OLD SYSTEM.						NEW SYSTEM.					
Number of Glass.	Focal Distance in Inches, English or Paris, with Index of Refraction, 1.53.	PARIS INCHES.		ENGLISH INCHES.		Number of Glass.	Focal Distance in Millimeters.	PARIS INCHES.		ENGLISH INCHES.	
		Focal Distance in Millimeters.	Equivalents in Diop-tries.	Focal Distance in Millimeters.	Equivalents in Diop-tries.			Focal Distance in Paris Inches.	Corresponding No. in Old System with an Index of Refraction 1.53.	Focal Distance in English Inches.	Corresponding No. in Old System with an Index of Refraction 1.53.
72	67.9	1,835	0.54	1,719	0.58	0.25	4,000	148.00	156.0	158.0	167.48
60	56.6	1,530	0.65	1,433	0.70	0.5	2,000	74.00	78.0	79.0	83.74
48	45.3	1,224	0.82	1,146	0.87	0.75	1,333	49.00	52.0	52.7	55.86
42	39.6	1,070	0.93	1,003	1.00	1.00	1,000	37.00	39.2	39.5	41.87
36	34.0	919	1.09	861	1.16	1.25	800	29.6	31.2	31.6	33.49
30	28.3	756	1.31	716	1.4	1.5	666	24.6	26.1	26.3	27.87
24	22.6	611	1.64	572	1.7	1.75	571	21.	22.3	22.6	23.96
20	18.8	508	1.97	476	2.1	2.	500	18.5	19.5	19.7	20.88
18	17.0	460	2.17	430	2.32	2.25	444	16.4	17.4	17.5	18.55
16	15.0	405	2.47	380	2.63	2.5	400	14.8	15.6	15.8	16.74
15	14.1	381	2.62	357	2.8	3.	333	12.3	13.0	13.16	13.94
14	13.2	357	2.80	334	2.99	3.5	288	10.5	11.1	11.3	11.89
13	12.3	332	3.01	309	3.2	4.	250	9.25	9.8	9.9	10.49
12	11.3	305	3.28	286	3.5	4.5	222	8.22	8.7	8.8	9.32
11	10.3	278	3.60	261	3.83	5.	200	7.4	7.8	7.9	8.37
10	9.4	254	3.94	238	4.2	5.5	182	6.72	7.1	7.18	7.61
9	8.5	230	4.35	215	4.65	6.	166	6.16	6.5	6.6	7.00
8	7.5	203	4.93	190	5.27	7.	144	5.29	5.6	5.64	5.98
7	6.6	178	5.62	167	6.00	8.	125	4.6	4.88	4.9	5.19
6½	6.13	166	6.03	155	6.44	9.	111	4.11	4.35	4.4	4.66
6	5.6	151	6.62	142	7.00	10.	100	3.7	3.92	3.9	4.13
5½	5.2	141	7.09	132	7.62	11.	91	3.36	3.56	3.6	3.81
5	4.7	127	7.87	119	8.40	12.	83	3.08	3.26	3.3	3.5
4½	4.2	114	8.77	106	9.40	13.	77	2.84	3.01	3.	3.18
4	3.8	103	9.71	96	10.4	14.	71	2.64	2.8	2.8	2.97
3½	3.3	89	11.2	84	12.00	15.	67	2.47	2.62	2.6	2.76
3¼	3.1	84	11.9	78	12.7	16.	62	2.3	2.44	2.5	2.65
3	2.8	76	13.3	71	14.1	17.	59	2.18	2.34	2.3	2.43
2¾	2.6	70	14.3	66	15.2	18.	55	2.06	2.18	2.2	2.33
2½	2.36	64	15.6	59	16.7	20.	50	1.85	1.96	1.9	2.01
2¼	2.1	57	17.5	53	18.8						
2	1.88	51	19.6	47	20.9						